Name _____ class _____

PRE-TRIP SHEET Date of trip _____

We are planning to do observations of birds at the Jamaica Bay Wildlife Refuge field trip. You will chose a bird from the list of Birds of Jamaica Bay you hope to see and research its natural history. To increase the chances of seeing your chosen bird, use the resources provided to access data on that species, for JBWR, for that time of year. If that species has been spotted and reported to EBird.com database for that part of the year record that date below and gather information about that bird before the trip.

Using Ebird.com Register with a user name and password.

- If there were few or no sightings of that bird, choose a different bird to research.

Common Name of Bird _____

Record the last time the bird was seen in the JBWR . _____

Field Research Hypothesis statement:

Example: ***If*** *it is ____(season) , then _____(we should expect to see) ____ birds,* ***because*** *____ (background research, cite sources).*_____

IF_____,

THEN _____,

BECAUSE _____ .

RUBRIC	Mastery	Developing	Below standard
Hypothesis statement and using resources	Student used resources to choose bird and state prediction and reasoning	Student used resources to choose bird and state prediction.	Student did not state prediction using resources.

VOCABULARY : Use printed or internet sources to answer the following questions on bird anatomy.

WORD CHOICES: Reproduce, regurgitate, vertebrate, feathers, warm-blooded, migrations, incubate, insulation, streamlined shape, beaks, fly, talons, wings, wading, webbed, heat

1. Birds have a _____ that travels down the length of its body.
2. Endothermic is a term that means _____.
3. The birds metabolism is its source of body _____. Bird body temperatures are higher than humans and can range about 105 degrees.
4. All birds are covered in _____ which provide _____ and _____.
5. Birds have unique mouth parts called _____ which have many shapes and sizes depending on what the bird _____.
6. Most birds have the ability to _____ by using pumping powerful muscles connected to their _____.
7. Long flights called _____ move birds all over the lobe in search for food and nesting areas.
8. When birds reproduce they must build suitable _____ for the eggs and chicks to grow.
9. All birds _____ by laying eggs. The baby embryo develops as the parent birds _____ by keeping it warm and protected.
10. To feed the chicks, parent birds may _____ bits of food into their mouths.
11. Birds are adapted to different habitats. _____ are sharp claws used for grabbing prey, while _____ feet are using for swimming. Long legs are good for _____ in shallow water.

Extension: Use these words in a story about a bird.

Classroom Video Ethogram Practice

An **ethogram** is a tool that behavior scientists and ecologists use to monitor behavior of animals in zoos and in the wild. **Behavior i**s everything a human or animal does. By charting various behaviors over time, they can see patterns in species behavior to better understand them, formulate questions and solve problems.

Ethograms can be designed to focus on any question the researcher thinks up. For example, an aquarium may organize their observations of a whale and calf on an ethogram set up as a checklist with behaviors that nursing whales do. Because it is important to make sure the calf is eating, the biologists can easily data on the chart without having to spend too much time writing. It is up to the researcher how to space the intervals.

Other examples include a field biologist may record the behavior of fledging chicks in a population affected by climate change or a student who wants to monitor the community of song birds at their backyard bird feeder. Scientists may use video, audio recordings and computer programs to record behavior. This data can be analyzed to form research questions for further study.

Instructions: Student scientists will practice observing behavior using video footage to compare two different birds.

1. Observe the behavior of the bird in the video, noting everything it does. Add to the list that has been started for you.
2. Watch the video again and put tally marks in that column when the bird performs that behavior.
3. A new trial will start record behavior in 30 second intervals. A timekeeper will notify you to start a new interval.
4. After you have completed the first video and ethogram, write your impressions in your journals and any questions you thought of before you watch the second video. Answer the guiding questions.

Bird Video 1 _____ 30 second intervals

Time interval	fly	walk	swim	sit	peck	Not seen	singing	other
00:15 sec								
15:30 sec								
30:45 sec								
total								

Bird Video 2 _____ 30 second intervals

Time interval	fly	walk	swim	sit	peck	Not seen	singing	other
00:15 sec								
15:30 sec								
30:45 sec								
total								

- How could this data be plotted on bar graph?

What did each of the birds spend most of their time doing during the observations?

Bird 1 _____

Bird 2 _____

- What reaching questions came up? _____
  _____
- Design a possible plan to answer them.
- Compare your data with your partner's data, why might they appear slightly different? _____
- Draw a Venn diagram comparing the similarities and differences of these two birds.

Station 1 Location _____ _____

Record all the abiotic factors you observe in this area.

Air temp	Precipitation humidity	Wind speed	Wind direction	Cloudy or clear

Ground type Sand or soil	Is Water visible ?	Salt or fresh water nearby		

List all the animals you see.

_____

_____

Choose a bird. Record identifying characteristics such as: color, shape, size, body parts, behavior, number of the same kind, location, nest, what it is eating, etc. Name of bird _____

_____

_____

_____

Draw

Station 2 Location _____ _____

Record all the abiotic factors you observe in this area.

Air temp	Precipitation humidity	Wind speed	Wind direction	Cloudy or clear

Ground type Sand or soil	Is Water visible ?	Salt or fresh water nearby		

List all the animals you see.

_____

_____

Choose a bird. Record identifying characteristics such as: color, shape, size, body parts, behavior, number of the same kind, location, nest, what it is eating, etc. Name of bird _____

_____

_____

_____

Draw

Station 1: Use the ethogram below and a timer to tally the bird's behaviors in one minute intervals. You may include additional behaviors to the ethogram.

Time interval	fly	walk	swim	sit	peck	preen groom	singing	other _____
Minute 1								
Minute 2								
Minute 3								
Minute 4								
total								

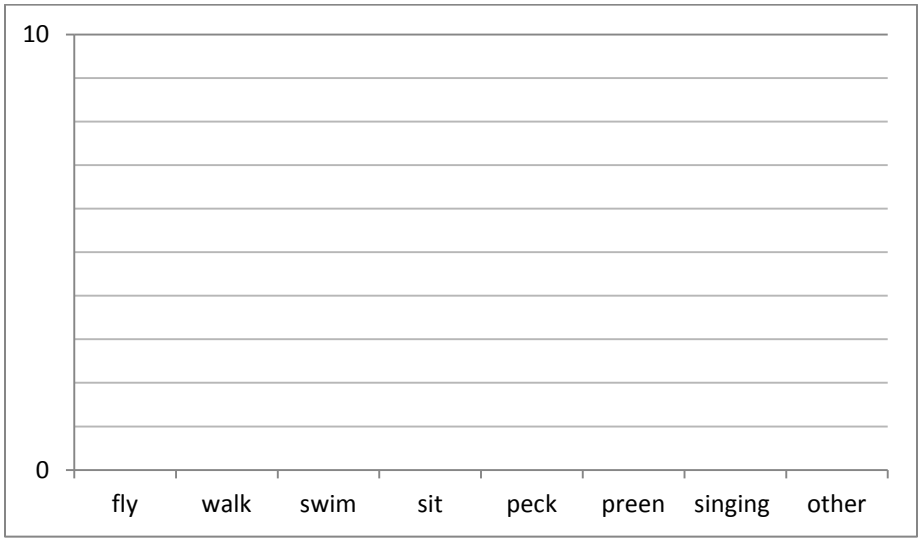
Add the total for the different behavior and plot a bar graph below.

How did this bird spend most of its time? _____

How did it interact with its environment? _____

What are some things you want to find out? _____

How can you design a way to find out? _____



Station 2: Use the ethogram below and a timer to tally the bird's behaviors in one minute intervals. You may include additional behaviors to the ethogram.

Time interval	fly	walk	swim	sit	peck	Preen groom	singing	Other _____
Minute 1								
Minute 2								
Minute 3								
Minute 4								
total								

Add the total for the different behavior and plot a bar graph below.

How did this bird spend most of its time? _____

How did it interact with its environment? _____

What are some things you want to find out? _____

How can you design a way to find out? _____